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Abstract

Recent research has documented that competent-looking political candidates do better in U.S. elections and that babyfaced individuals are generally perceived to be less competent than maturefaced individuals. Taken together, this suggests that babyfaced political candidates are perceived as less competent and therefore fare worse in elections. We test this hypothesis, making use of photograph-based judgments by 2,772 respondents of the facial appearance of 1,785 Finnish political candidates. Our results confirm that babyfacedness is negatively related to inferred competence in politics. Despite this, babyfacedness is either unrelated or positively related to electoral success, depending on the sample of candidates.

JEL Classification: D72, J45, J7.

Keywords: Babyfacedness, competence, beauty, trustworthiness, elections.

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Introduction

In a study of elections to the U.S. Congress, Todorov et al. (2005) report that inferences of competence based on candidates' facial appearance predict the winners in both Senate and House races to a high degree.¹ Zebrowitz and Montepare (2005) conjectured that this finding might reflect differences in babyfacedness. By babyfacedness they mean neotenous facial features like a round face, large eyes, small nose, high forehead, and small chin. Previous research suggests that a more babyfaced individual is perceived as less competent (Zebrowitz, 1997).

In this paper we provide the first test of the conjecture that babyfacedness is negatively related to electoral success and that this effect works through perceptions of competence. In addition to doing this, we also consider a possible halo effect of beauty and take gender differences into account. For these purposes, we have collected an extensive dataset of photograph-based judgments of 1,785 candidates from the Finnish parliamentary and municipal elections in 2003–2004. Two particular strengths of our approach are that we use raters from other countries than Finland, ruling out familiarity with the politicians, and that about half of our candidates are female, enabling an investigation of whether the results depend on the gender of the candidates.

Previous studies affirm that people tend to make various trait judgments on the basis of facial appearance and that such judgments influence behavior (Ambady & Rosenthal, 1992; Langlois et al., 2000; Willis & Todorov, 2006; Rule & Ambady, 2008). More specifically, babyfacedness has been shown to be important for how a person is perceived and treated in non-political settings, and not only with regard to inferred competence (Zebrowitz & McDonald, 1991; Brownlow, 1992; Zebrowitz & Montepare, 1992; Zebrowitz et al., 1993; Zebrowitz et al., 2007; Gorn et al., 2008; Todorov, 2008). We extend this literature by examining the role of babyfacedness in political elections.

¹ Ballew & Todorov (2007) reach a similar conclusion in the context of U.S. gubernatorial elections. Little et al. (2007) examine the role of face shape as a predictor of voting decisions, concluding that its effects may vary between times of peace and war.

Survey and dataset

Our dataset is based on a web survey with 2,772 respondents and includes perceptions of several traits, e.g., babyfacedness, competence, beauty and trustworthiness, as well as a measure of relative electoral success, defined as a candidate's votes divided by the average number of votes for all candidates on the list. Each respondent evaluated four randomly chosen candidate photographs from the election campaign (two of each gender). The respondents were informed that they would evaluate political candidates. To avoid recognition, no Finnish respondents participated. Americans (31%) and Swedes (31%) make up a majority of the respondents. Our photographs depict faces of 868 male and 917 female candidates in the 2003 parliamentary election and the 2004 municipal elections. The photographs are the ones used by the political candidates in the campaigns. The size of the photographs is approximately 3.5 cm (width) x 4.5 cm (height). In connection with each photograph, several questions were asked, e.g.,

How mature-faced or babyfaced (i.e. childlike or youthful looking) do you find this person relative to other people of the same sex and age?

Very mature-faced

Somewhat mature-faced

Neither mature-faced nor babyfaced

Somewhat babyfaced

Very babyfaced

Don't know / Prefer not to answer

The answers were converted to a five-point scale with "Very mature-faced" coded 1 and "Very babyfaced" coded 5.

Babyfacedness and perceived competence are negatively correlated ($-.10$; $p < .001$), in line with related research (Montepare & Zebrowitz, 1998). The correlation coefficient is higher for male candidates ($-.15$; $p < .001$) than for female candidates ($-.07$; $p < .001$). There is furthermore a relatively

high degree of interrater reliability of babyfacedness vs. maturefacedness, irrespective of the age, gender, and nationality of the respondents. The average score intraclass correlation coefficient (ρ) is .78 (Spearman-Brown prediction formula), in line with previous results as reported by Montepare & Zebrowitz (1998). Interrater reliability of babyfacedness vs. maturefacedness is stronger than interrater reliability of competence ($\rho=.55$) and trustworthiness ($\rho=.48$), but weaker than interrater reliability of beauty ($\rho=.83$).

Whereas Todorov et al. (2005) mainly study male political candidates over 30, our dataset includes younger candidates (14% below 30), and is also balanced in terms of gender (51% female candidates). This could prove important, since age and gender affect a person's degree of babyfacedness (Zebrowitz & Montepare, 1992) and since they could also affect how babyfacedness influences other trait judgments.

The variables

Our four trait variables babyfacedness, competence, beauty, and trustworthiness are constructed in two steps. First we compute the mean of all judgments of a particular photograph for each trait. From this measure we subtract, for each trait, the mean judgment for the candidates on the same list. Thus, the trait variables are *relative* measures, capturing how babyfaced, competent, beautiful, and trustworthy a candidate is perceived to be in relation to the competitors on the same list.

The dependent variable is defined in the following way for candidate i on list j :

$$\text{Relative electoral success}_{i,j} = (p_i / v_j) \quad (1)$$

where p_i is candidate i 's number of personal votes and v_j is the average number of votes for all candidates on list j .

The Finnish political system

Finland has a unicameral parliament with 200 MPs, and a proportional electoral system. Voters have to vote for one particular candidate. In each district, parties present lists of their candidates. The legislature seats of a district are allocated based on party vote shares and personal votes, using the d'Hondt seat-allocation rule. With this rule, the total number of seats allocated to each list depends on the vote totals of all competing lists. Inside the list, the order in which candidates receive seats is determined by the number of personal votes. The same system is used at the municipal level.²

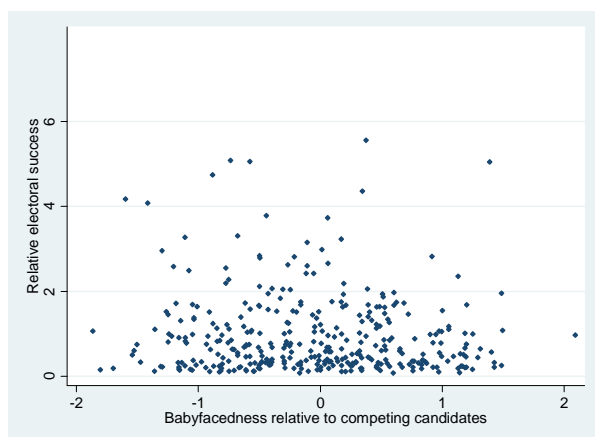
Results and discussion

The Zebrowitz & Montepare (2005) conjecture that babyfacedness is an underlying predictor of electoral success is not supported by our data. This is evident already when looking at correlation coefficients from the parliamentary election. Although the correlation coefficient between babyfacedness and electoral success is negative, it is small and statistically insignificant ($-.06$; $p=.12$)—see Fig. 1 for an illustration—and in fact zero when controlling for age.³ In line with Todorov et al. (2005), electoral success is instead correlated with inferred competence ($.16$; $p<.001$), but also with beauty ($.13$; $p<.001$).

² For more facts about the Finnish political system, see Raunio (2005).

³ The correlation is negative since older candidates are perceived as more mature-faced and receive more votes on average. The partial correlation coefficient between babyfacedness and electoral success is positive but small and indistinguishable from zero ($.01$; $p=.88$) when the age of candidates is controlled for.

Male candidates



Female candidates

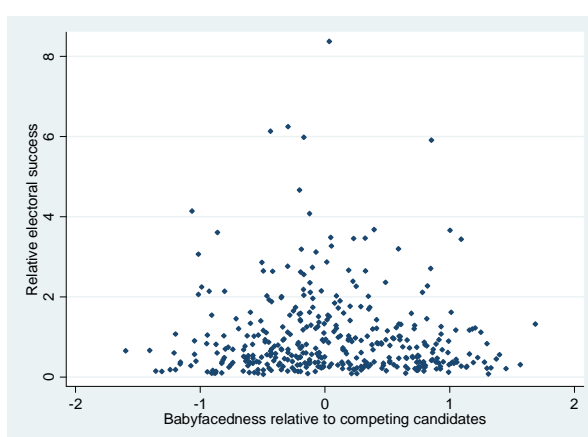


Fig. 1. Scatterplot of babyfacedness (relative to competing candidates) and relative electoral success in the 2003 Finnish parliamentary election, excluding party leaders.

Since Zebrowitz and Montepare (2005) explicitly state that the hypothesis of a relationship between babyfacedness and electoral success is thought to hold when age and gender are controlled for, and since incumbency is a strong predictor of electoral success (see e.g. Lee, 2008), we run linear regressions controlling for incumbency, gender, and age. The estimates, presented in Tables 1 and 2, reveal that the effect of babyfacedness is generally small and statistically insignificant. This result holds both when controlling, and when not controlling, for competence and other perceived traits (beauty and trustworthiness). In particular, the fact that including competence does not affect the babyfacedness coefficient much suggests that any effect of babyfacedness on relative electoral success is not mediated by competence (Baron & Kenny, 1986). The fact that our respondents are of different nationalities, most notably from Sweden and the U.S., should not affect the results, since they make very similar trait judgments. For example, American respondents rate the candidates' babyfacedness as 2.84 on average, while the corresponding figure for the Swedish respondents is 2.88. A t-test clarifies that equal means cannot be rejected at the five percent significance level (and this holds for all trait variables).

Table 1

Standardized regression coefficients of babyfacedness, competence, beauty, and trustworthiness as predictors of relative electoral success in the 2003 parliamentary election in Finland

Predictor	Parliamentary candidates			Male parliamentary candidates			Female parliamentary candidates		
Babyfacedness	.02	.04	.02	.09*	.11**	.11**	-.02	-.01	-.04
Competence		.10***	.05*		.13***	.11***		.06	-.01
Beauty			.10***			.07			.13***
Trustworthiness			.03			-.003			.06*
Accounted variance (R^2)	35%	36%	37%	43%	45%	46%	32%	32%	34%
Number of candidates	743	743	743	349	349	349	394	394	394

Note. All candidates (i.e. both male and female) are included in the trait calculations used in regressions for male and female candidates separately. The regressions also contain a constant term and the unreported control variables Incumbent, Age, Age squared, and Male candidate (when applicable). *P*-values are based on robust standard errors.

* $p < .10$, ** $p < .05$, *** $p < .01$.

For the full set of candidates, beauty evaluations emerge as the strongest predictor of electoral success, possibly reflecting a halo effect (Nisbett & Wilson, 1977). The sample of male candidates in the parliamentary election (Table 1) is notable in two respects. First, the estimated babyfacedness coefficients are *positive*, contrary to the Zebrowitz & Montepare (2005) conjecture. Second, competence evaluations emerge as the strongest predictor of electoral success. The second finding is well in line with the results reported by Todorov et al. (2005) based on a similar sample of predominantly male candidates.

Several point estimates suggest different explanations of electoral success for male and for female candidates, most notably beauty as the strongest predictor for females and competence as the strongest predictor for males. These findings should, however, be interpreted with caution, as the gender differences are not statistically significant. We test for gender differences by interacting the trait variables with a dummy variable for male candidates in specifications based on the full sample of both male and female

Table 2

Standardized regression coefficients of babyfacedness, competence, beauty, and trustworthiness as predictors of relative electoral success in the 2004 municipal elections in Finland

Predictor	Municipal candidates			Male municipal candidates			Female municipal candidates		
Babyfacedness	.00	.02	.01	-.01	.0002	-.003	.01	.02	.01
Competence		.04**	.01		.04*	.02		.04	.01
Beauty			.06**			.02			.08**
Trustworthiness			-.002			.01			-.01
Accounted variance (R^2)	39%	39%	39%	40%	41%	41%	38%	38%	39%
Number of candidates	1,042	1,042	1,042	519	519	519	523	523	523

Note. All candidates (i.e. both male and female) are included in the trait calculations used in regressions for male and female candidates separately. The regressions also contain a constant term and the unreported control variables Incumbent, Age, Age squared, and Male candidate (when applicable). *P*-values are based on robust standard errors.

* $p < .10$, ** $p < .05$, *** $p < .01$.

candidates, in the parliamentary election and in the municipal elections respectively. The importance of analyzing effects of facial appearance by gender is stressed by Chiao et al. (2008), but whereas they report

that both men and women find male candidates more competent, we find that both men and women rate candidates of their own gender as more competent.

There are some signs of weaker predictive power of our facial traits in the municipal elections, e.g., fewer estimated coefficients that attain statistical significance and smaller point estimates overall. This may result from less exposure per candidate to the voters, both since television appearances are rarer for municipal candidates (cf. Lenz & Lawson, 2008) and since the number of photographs in an electoral poster is larger in municipal elections (but otherwise, photographs are displayed in a similar manner). Notably, we find that judgments of babyfacedness are never related to electoral success in a statistically significant way and that electoral success in the municipal elections is not predicted by competence judgments when we control for beauty.

To test the effects of respondents evaluating all photos on the same list, rather than a random selection of four, we have asked six Swedish respondents to assess *all* 504 photos of the municipal candidates in Helsinki. Results are reported in the Appendix. The estimated effect of babyfacedness is positive and statistically significant for this sample of candidates, rejecting the Zebrowitz & Montepare (2005) hypothesis.

To conclude, our main finding is robust: babyfaced political candidates are seen as less competent, but they do not fare worse in elections than their maturefaced competitors. Rather, we find that competence and, especially, beauty evaluations are in themselves positively related to electoral success.

Appendix

On trait evaluations by Swedes and Americans

The average trait evaluations by American and Swedish respondents referred to in the paper are presented in Table A1. In none of the four rows can we reject the null hypothesis of equal means among American and Swedish respondents at the five percent significance level (using a t-test).

Table A1

Average evaluations by American and Swedish respondents (*SD*)

	Americans	Swedes
Babyfacedness	2.84 (1.11)	2.88 (1.03)
Competence	3.26 (.85)	3.29 (.84)
Beauty	2.77 (.99)	2.75 (.96)
Trustworthiness	3.17 (.81)	3.18 (.86)

On correlations between variables

Intercorrelations for all of the variables for all candidates combined as well as separately for male and female candidates, both for the parliamentary and the municipal elections, are presented in Table A2.

The table shows that babyfacedness has a small negative correlation with electoral success (which is statistically significant at the 5 percent level in one instance out of six, i.e., for male candidates in the municipal election). It also shows that babyfacedness is negatively correlated with competence and positively correlated with beauty.

Table A2

Correlation coefficients (p-values) for all variables, parliamentary and municipal elections, male and female candidates; one candidate is one observation

	All parliamentary candidates						
	Electoral success	Babyfaced- ness	Competence	Beauty	Trustworthi- ness	Incumbent	Age
Electoral success	1						
Babyfacedness	-.06 (.12)	1					
Competence	.16 (<.001)	-.19 (<.001)	1				
Beauty	.13 (<.001)	.23 (<.001)	.30 (<.001)	1			
Trustworthiness	.08 (.02)	-.01 (.88)	.32 (<.001)	.22 (<.001)	1		
Incumbent	.58 (<.001)	-.11 (.003)	.12 (.001)	.03 (.37)	.03 (.37)	1	
Age	.10 (.004)	-.59 (<.001)	.12 (<.001)	.01 (.76)	.01 (.76)	.18 (<.001)	1
Male candidate	-.02 (.61)	-0.8 (.03)	.04 (.25)	-.38 (<.001)	-.38 (<.001)	.02 (.16)	.19 (<.001)

Male parliamentary candidates							
	Electoral success	Babyfaced- ness	Competence	Beauty	Trustworthi- ness	Incumbent	Age
Electoral success	1						
Babyfacedness	-.06 (.26)	1					
Competence	.16 (.003)	-.23 (<.001)	1				
Beauty	.07 (.17)	.11 (.03)	.28 (<.001)	1			
Trustworthiness	.09 (.11)	-.07 (.17)	.36 (<.001)	.22 (<.001)	1		
Incumbent	.65 (<.001)	-.13 (.02)	.06 (.28)	-.03 (.53)	.05 (.36)	1	
Age	.23 (<.001)	-.60 (<.001)	.21 (<.001)	-.21 (<.001)	.12 (.02)	.28 (<.001)	1

Female parliamentary candidates							
	Electoral success	Babyfaced- ness	Competence	Beauty	Trustworthi- ness	Incumbent	Age
Electoral success	1						
Babyfacedness	-.06 (.23)	1					
Competence	.17 (.001)	-.14 (.004)	1				
Beauty	.16 (.001)	.32 (<.001)	.35 (<.001)	1			
Trustworthiness	.08 (.100)	.01 (.92)	.37 (<.001)	.12 (.02)	1		
Incumbent	.55 (<.001)	-.09 (.09)	.19 (<.001)	.10 (.05)	.04 (.43)	1	
Age	.03 (.50)	-.58 (<.001)	.03 (.58)	-.40 (<.001)	.05 (.29)	.11 (.03)	1

All municipal candidates								
	Electoral success	Babyfaced- ness	Competence	Beauty	Trustworthi- ness	Incumbent	Age	
Electoral success	1							
Babyfacedness	-.06 (.05)	1						
Competence	.09 (.002)	-.25 (<.001)	1					
Beauty	.07 (.02)	.24 (<.001)	.36 (<.001)	1				
Trustworthiness	.06 (.07)	.07 (.03)	.36 (<.001)	.22 (<.001)	1			
Incumbent	.62 (<.001)	-.12 (<.001)	.10 (.001)	.01 (.81)	.04 (.26)	1		
Age	.11 (<.001)	-.68 (<.001)	.15 (<.001)	-.34 (<.001)	.05 (.099)	.21 (<.001)	1	
Male candidate	-.06 (.07)	-.03 (.37)	.04 (.22)	-.16 (<.001)	-.35 (<.001)	.005 (.88)	.14 (<.001)	

Male municipal candidates								
	Electoral success	Babyfaced- ness	Competence	Beauty	Trustworthi- ness	Incumbent	Age	
Electoral success	1							
Babyfacedness	-.11 (.011)	1						
Competence	.11 (.010)	-.30 (<.001)	1					
Beauty	.02 (.71)	.13 (<.001)	.37 (<.001)	1				
Trustworthiness	.05 (.22)	-.15 (<.001)	.42 (<.001)	.21 (<.001)	1			
Incumbent	.64 (<.001)	-.17 (<.001)	.12 (.005)	-.04 (.39)	.05 (.28)	1		
Age	.13 (.002)	-.70 (<.001)	.23 (<.001)	-.18 (<.001)	.12 (.008)	.22 (<.001)	1	

Female municipal candidates								
	Electoral success	Babyfaced- ness	Competence	Beauty	Trustworthi- ness	Incumbent	Age	
Electoral success	1							
Babyfacedness	-.02 (.70)	1						
Competence	.08 (.06)	-.17 (<.001)	1					
Beauty	.10 (.02)	.34 (<.001)	.38 (<.001)	1				
Trustworthiness	.03 (.55)	.01 (.77)	.38 (<.001)	.16 (<.001)	1			
Incumbent	.62 (<.001)	-.05 (.25)	.07 (.096)	.05 (.30)	.03 (.49)	1		
Age	.11 (.012)	-.67 (<.001)	.05 (.24)	-.45 (<.001)	.10 (.03)	.21 (<.001)	1	

On the second, smaller study

The results from regressions based on a survey in which the respondents evaluated all photos on the same list, rather than a random selection of four, are reported in Table A3. It is based on a sample of six Swedish respondents who assessed *all* 504 photos of the municipal candidates in Helsinki. Three of the respondents are men (aged 29, 30, 39) and three are women (aged 35, 36, 70). This means that the six Swedish respondents each evaluated four full lists of candidates who competed against each other in the same municipality.⁴ Another advantage with having each respondent evaluate all photos under study is that we can obtain normalized ratings by using deviations from each respondent's average rating and dividing this difference by the standard deviation of the respondent's ratings.

Table A3

Standardized regression coefficients of babyfacedness, competence, beauty, and trustworthiness as predictors of relative electoral success in the 2004 Helsinki municipal election in Finland, using a small survey with six Swedish respondents

Babyfacedness	.08**	.10**	.10**
Competence		.09***	.09**
Beauty			.01
Trustworthiness			.01
Incumbent	.59***	.58***	.58***
Age	.22	.25	.26
Age squared	-.15	-.17	-.18
Male candidate	-.08**	-.08**	-.07
Accounted variance (R^2)	35%	36%	36%
Number of candidates	504	504	504

Note. The regressions also include a constant term (not reported here). P -values are based on robust standard errors.

* $p < .10$, ** $p < .05$, *** $p < .01$.

⁴ While six respondents are only a tiny share of what we have in our full survey, other studies (e.g. Hamermesh, 2006) have used even fewer respondents.

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